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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,511	06/23/2003	Juergen Ramin	080310.47624D1	9833

23911 7590 09/28/2004

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EXAMINER
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LUND, JEFFRIE ROBERT

ART UNIT	PAPER NUMBER
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1763

DATE MAILED: 09/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/600,511

Applicant(s)

RAMM ET AL.

Examiner

Jeffrie R. Lund

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 23-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: In figure 1 reference numbers 51a and H (see page 16 lines 16 and 17). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.
3. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.

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- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 33 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant

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regards as the invention. Claim 33 is indefinite because it depends on claim 10. Claim 10 has been cancelled.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 23-29, and 31-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Ushikawa, US Patent 5,225,378.

Ushikawa teaches a processing chamber that includes a plasma discharge section 20c; a gas supply connected to a gas tank 16; and a workpiece holding arrangement 12 holding a disk or plate shaped workpiece 11. The workpiece holding arrangement includes a magazine (boat) with a plurality of slits stacked one above another, and the slits hold the workpieces in a plane parallel to and separated from each other at a distance. The particular type of gas used is a process limitation rather than an apparatus limitation, and the recitation of a particular type of gas does not so limit an apparatus claim, see *In re Casey*, 152 USPQ 235; *In re Rishoi*, 94 USPQ 71; *In re Young*, 25 USPQ 69; *In re Dulberg*, 129 USPQ 348; *Ex parte Thibault*, 164 USPQ 666; and *Ex parte Masham*, 2 USPQ2d 1647. This rejection is based on the fact that the gas tank 16 taught by Ushikawa has the inherent capability of being used in the manner intended by the Applicant.

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9. Claims 23 and 29-33 are rejected under 35 U.S.C. 102(b) as being anticipated by Ramm et al, US Patent 5,384,018.

Ramm et al teaches a processing chamber that includes a low voltage hot cathode plasma discharge section 1; a gas supply 40 for supplying hydrogen as a working gas; and a workpiece holding arrangement 38 holding a workpiece. The gas supply 40 is inherently connected to a gas tank. The particular type of gas used is a process limitation rather than an apparatus limitation, and the recitation of a particular type of gas does not so limit an apparatus claim, see *In re Casey*, 152 USPQ 235; *In re Rishoi*, 94 USPQ 71; *In re Young*, 25 USPQ 69; *In re Dulberg*, 129 USPQ 348; *Ex parte Thibault*, 164 USPQ 666; and *Ex parte Masham*, 2 USPQ2d 1647. This rejection is based on the fact that the gas supply system taught by Ramm et al has the inherent capability of being used in the manner intended by the Applicant.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 24-28 and 34 are rejected under 35 U.S.C. 103(a) as being obvious over Ramm et al, US patent 5,384,018 in view of Ushikawa, US patent 5,225,378.

Ramm et al was discussed above.

Ramm et al differs from the present invention in that Ramm et al does not teach that the workpiece holding arrangement includes a magazine (boat) with a plurality of

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slits stacked one above another, and the slits hold the workpieces in a plane parallel to and separated from each other at a distance.

Ushikawa was discussed above and includes a workpiece holding arrangement includes a magazine (boat) with a plurality of slits stacked one above another, and the slits hold the workpieces in a plane parallel to and separated from each other at a distance.

The motivation for using the workpiece holding arrangement of Ushikawa in the apparatus of Ramm et al is to provide a workpiece support as is required by Ramm et al, but is only generically described. The use of boats (cassettes, magazines or the like) for holding a plurality of workpieces in a processing chamber is well known in the art, and allows for a large number of workpieces to be treated at the same time, thereby increasing throughput and process efficiency.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the workpiece holding arrangement of Ushikawa in the apparatus of Ramm et al.

12. Claim 30 is rejected under 35 U.S.C. 103(a) as being obvious over Ushikawa, US patent 5,225,378 in view of Ramm et al, US patent 5,384,018.

Ushikawa was discussed above.

Ushikawa differs from the present invention in that Ushikawa does not teach that the plasma gas activator 20c is a hot cathode.

Ramm et al was discussed above and includes a hot cathode plasma gas activator.

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The motivation for replacing the plasma gas activator of Ushikawa with the plasma gas activator of Ramm et al is to provide an alternate and equivalent plasma gas activator to activate a working gas as taught by Ramm et al.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the plasma activating means of Ushikawa with the hot cathode of Ramm et al.

### ***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited art teaches the technological background of the invention. The cited art contains patents that could be used to reject the claims under 35 USC § 102 or 103. These rejections have not been made because they do not provide any additional or different teachings, and if they were applied, would have resulted in an undue multiplication of references. (See MPEP 707.07(g))

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrie R. Lund whose telephone number is (571) 272-1437. The examiner can normally be reached on Monday-Thursday (6:30 am-6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Mills can be reached on (571) 272-1439. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

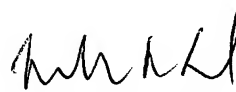
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.



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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jeffrie R. Lund  
Primary Examiner  
Art Unit 1763

JRL  
9/26/04